

**REMARKS**

By this Amendment, claims 32 and 36 are amended. Claims 34-35 are canceled and claim 37 is added. No new matter is added. Accordingly, claims 20-30, 32-33 and 36-37 are pending. Reconsideration of the application in view of the foregoing amendments and the following remarks is respectfully requested.

**1. §112, First Paragraph Rejection**

Claims 34-36 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 34-35 are canceled. Claim 36 is amended. Support for the amendments to claim 36 may be found through the original specification and drawings. For example, specific support may be found at page 2, line 20 through page 3, line 2; page 3, lines 7-9; page 3, lines 10-13; page 6, lines 7-9; page 7, lines 3-5; page 8, within "Chart Two;" and Figures 3-5 and 9.

Applicants respectfully submit that the phrases to which the Office Action objects have been replaced with language that the Applicants believe is responsive the Office Action objection. Applicants respectfully submit that the above rejection is moot with respect to claims 34-36. Accordingly, withdrawal of this rejection is respectfully requested.

**2. §112, Second Paragraph Rejection**

Claims 20-30 and 32-36 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 34-35 are canceled. Claims 32 and 36 are amended. Support for the amendments to claim 36 may be found through the original specification and drawings. For example, specific support may be found at page 2, line 20 through page 3, line 2; page 3, lines 7-9; page 3, lines 10-13; page 6, lines 7-9; page 7, lines 3-5; page 8, within "Chart Two;" and Figures 3-5 and 9.

Applicants respectfully submit that the phrases to which the Office Action objects have been replaced with language that the Applicants believe is responsive to the Office Action objection. Applicants respectfully submit that the above rejection is moot with respect to claims 20-30, 32-33 and 36-37. Accordingly, withdrawal of this rejection is respectfully requested.

3. **§103(a) Rejection over JP715 and JP314**

Claims 20-29 and 32-36 stand rejected under 35 U.S.C. §103(a) over Japanese Patent JP 10-138715 ("JP715") in view of Japanese Patent JP 11-240314 ("JP314"). This rejection is respectfully traversed.

Independent claim 32 recites, *inter alia* that "an angled sipe formed in each of the tread blocks, **each sipe** extending for a sipe lateral width and a radial sipe depth at a constant sipe angle of inclination between 2° and 15° with respect to a second radial plane passing through an outermost tread surface of the tread block and adjacent to the sipe and through an axis of rotation of the tire." (Emphasis added).

Further, claim 32 recites that "**each sipe** within said rib tread blocks **on a first side** of the mid-circumferential plane **extends at a first sipe angle of inclination** with respect to said second radial plane for the sipe lateral width and the radial sipe depth" and that "**each sipe** within said rib tread blocks **on a second side** of the mid-circumferential plane **extends at a second angle of inclination** with respect to said second radial plane that is equal to and opposite the first sipe angle for the sipe lateral width and the radial sipe depth." Support for the amendments to claim 36 may be found through the original specification and drawings. For example, specific support may be found at page 2, line 20 through page 3, line 2; page 3, lines 7-9; page 3, lines 10-13; page 6, lines 7-9; page 7, lines 3-5; page 8, within "Chart Two;" and Figures 3-5 and 9.

Claims 36 and 37 include similar language that excludes tread blocks that include oppositely angled sipes in each block that would result in a block capable of generating a torque based upon opposite forces generated within the same tread block.

Applicants respectfully submit that JP715 and JP314 both teach generating a torque within a tread block based upon sipes that use opposite angles to generate opposite forces within each tread block. Further, neither JP715 and JP314 teach tread blocks on a first side of a mid-circumferential plane with sipes at a first sipe angle of inclination and tread blocks on a second side of the mid-circumferential plane with sipes at a second sipe angle of inclination that is equal to and opposite the first sipe angle of inclination, as recited in the claims.

Accordingly, it is respectfully submitted that claims 32, 36 and 37 are patentably distinguishable over the applied art. Claims 20-30 depend from independent claim 32 and are likewise patentably distinguishable over the applied art for at least their dependence on allowable base claims, as well as for additional features they recite. Accordingly, withdrawal of this rejection is respectfully requested.

4. **§103(a) Rejection over US046, DE697 and DE547**

The Office Action rejects claims 20-29 and 32-36 under 35 U.S.C. §103(a) over U.S. Patent No. 4,298,046 to Herbelleau (“US046”) and, optionally, German Patent No. DE19506697 (“DE697”) and German Patent No. DE4107547 (“DE547”).

As addressed above, claim 32 recites that “**each sipe** within said rib tread blocks **on a first side** of the mid-circumferential plane **extends at a first sipe angle of inclination** with respect to said second radial plane for the sipe lateral width and the radial sipe depth” and that “**each sipe** within said rib tread blocks **on a second side** of the mid-circumferential plane **extends at a second angle of inclination** with respect to said second radial plane that is equal to and opposite the first sipe angle for the sipe lateral width and the radial sipe depth.” Claims 36 and 37 include similar language. Support for the amendments to claim 36 may be

found through the original specification and drawings. For example, specific support may be found at page 2, line 20 through page 3, line 2; page 3, lines 7-9; page 3, lines 10-13; page 6, lines 7-9; page 7, lines 3-5; page 8, within "Chart Two;" and Figures 3-5 and 9.

Cited references US046, DE697, and DE547 do not teach or suggest such a feature, nor would such a feature have been obvious to one of ordinary skill in the art at the time the invention was made.

Accordingly, it is respectfully submitted that claims 32, 36 and 37 are patentably distinguishable over the applied art, for at least the reasons stated above with respect to claim 32. Claims 20-29 depend from independent claim 32 and are likewise patentably distinguishable over the applied art for at least their dependence on allowable base claims, as well as for additional features they recite. Accordingly, withdrawal of this rejection is respectfully requested.

**5. §103(a) Rejection of Claim 30**

The Office Action rejects claim 30 under 35 U.S.C. §103(a) over U.S. Patent No. 4,298,046 to Herbelleau ("US046") and, optionally, German Patent No. DE19506697 ("DE697") and German Patent No. DE4107547 ("DE547"), and further in view of U.S. Patent No. 5,538,060 to van der Meer ("US060").

As addressed above, claim 32 recites that "**each sipe** within said rib tread blocks **on a first side** of the mid-circumferential plane **extends at a first sipe angle of inclination** with respect to said second radial plane for the sipe lateral width and the radial sipe depth" and that "**each sipe** within said rib tread blocks **on a second side** of the mid-circumferential plane **extends at a second angle of inclination** with respect to said second radial plane that is equal to and opposite the first sipe angle for the sipe lateral width and the radial sipe depth." For reasons stated above, US046, DE697, and DE547 do not teach or suggest such a feature, nor would such a feature have been obvious to one of ordinary skill in the art at the time the

invention was made. US060 does not make up for the deficiency of US046 or the DE697/DE547 combination.

Accordingly, it is respectfully submitted that claim 32 is patentably distinguishable over the applied art. Claims 30 depends from independent claim 32 and is likewise patentably distinguishable over the applied art for at least its dependence on an allowable base claim, as well as for additional features it recites. Accordingly, withdrawal of this rejection is respectfully requested.

6. **§102(b) Rejection of Claim 36 over JP706**

The Office Action rejects claim 36 as unpatentable over Japanese Patent JP 4-100706 ("JP706"). This rejection is respectfully traversed.

Independent claim 36 recites, *inter alia* that "wherein said first and second sipe angles of inclination are set during a molding process of the tire, by inserting angled sipe blades in a tire tread mold, thereby allowing the residual aligning torque of the tire to be altered based upon the first and second sipe angles of inclination selected without changing the mold from which the tire tread is formed." (Emphasis added). Support for the amendments to claim 36 may be found through the original specification and drawings. For example, specific support may be found at page 1, lines 9-13; page 3, lines 18-21; page 7, line 15 through page 9, line 3; and page 9, line 3-13; and page 8, "Chart One" and "Chart Two."

Applicants respectfully submit that JP706 disclose, teach or suggest such a feature, nor would such a feature have been obvious to one of ordinary skill in the art at the time the invention was made.

Page 34, paragraph 5-6, JP706 defines lines "L" and "M" relative to the shape of the block and the shape of the leading and trailing edges of the grooves forming the block. On page 34, paragraph 1 (last line), JP706 states that sipes within a tread block are formed parallel to one of line "L" and "M." In contrast, the present application at page 5, lines 19-21,

states that "the particular shapes of the tread blocks . . . can vary without affecting the concept of the invention as well as the various directions and shapes of the intervening grooves."

As recited in claim 36, angled sipe blades may be inserted into a tire tread mold during a molding process of the tire, thereby allowing the residual aligning torque of the resulting tire to be altered based upon the first and second sipe angles of inclination selected without changing the mold from which the tire tread is formed. This is entirely different from JP706 in which the angle within the tread block is determined by the angles formed by the sides of the tread block.

For at least this reason, as well as other reasons described above, Applicants respectfully assert that claim 36 is patentably distinguishable over the cited references and JP706. Accordingly, it is respectfully submitted that claim 36 is patentably distinguishable over the applied art. Accordingly, withdrawal of this rejection is respectfully requested.

**7. New Claim 37**

By this Amendment, claims 37 is added. No new matter is added. Claim 37 is a method claim based upon claim 36, as suggested by the Examiner at page 10, lines 11-14 of the Office Action.

Applicants respectfully submit that support for claims 37 may be found throughout the original specification and drawings. For example, specific support may be found at page 1, lines 9-13; page 3, lines 18-21; page 7, line 15 through page 9, line 3; and page 9, line 3-13; and page 8, "Chart One" and "Chart Two."

Accordingly, it is respectfully submitted that claim 37 is patentably distinguishable over the cited art, for at least the reasons stated above with respect to claim 32 and 36.

Accordingly, allowance of claim 37 is respectfully requested.

8. **Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 20-30, 32-33 and 36-37 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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